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4. (Amended) The polishing apparatus of Claim 3, wherein said at least one substrate head assembly comprises at least two substrate head assemblies capable of supporting [holding] thereon respective substrates.

5. (Amended) The polishing apparatus of Claim 4, wherein said at least two substrate head assemblies are simultaneously positionable to respective horizontal positions corresponding to [over] respective ones of said at least two polishing surfaces.

12. (Amended) A polishing method usable in an apparatus comprising a rotatable member rotatable about a first vertical axis, at least one substrate head assembly supported on said rotatable member, and at least two polishing surfaces vertically separated from [arranged below] said rotatable support at respective angular positions about said first axis, said method comprising the steps of:

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mounting a substrate onto a first one of said at least one substrate head assembly;
rotating said rotatable member to a position so that a second vertical axis passes through said substrate and through [overlies] a selected one of said polishing surfaces;
engaging said substrate with said selected polishing surface; and
imparting relative linear movement between said selected polishing surface and said first substrate head assembly while said substrate is engaged with said selected polishing surface.

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19. (Amended) A polishing apparatus, comprising:
a support member rotatable about a first axis;
at least two polishing surfaces arranged about said first axis;
at least two substrate head assemblies each capable of supporting [holding] thereon at least one substrate in contact with a selected one of said polishing surfaces and each being supported on [and linearly and reciprocally movable in] said carousel, reciprocal movement being provided between said substrate head and said selected polishing surfaces during

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engagement of said substrate with said selected polishing surface..

21. (Amended) The polishing apparatus of Claim 28 [20], further comprising at least two motors mounted on said support member and coupled to respective ones of said substrate head assemblies to move them linearly and reciprocally in said carousel.

Please add the following new claims:

27. The polishing method of Claim 12, wherein said polishing surfaces are arranged below said rotatable support and wherein said rotating step causes said substrate to overly said selected one of said polishing surfaces.

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28. The polishing apparatus of Claim 19, wherein said substrate head assemblies are capable of linear and reciprocal motion with respect to said carousel.

29. A polishing apparatus, comprising:
(N+1) substrate head assemblies each capable of supporting thereon a respective substrate, wherein N is greater than 1;
a support member rotatable about an axis and supporting said substrate head assemblies at (N+1) first positions equiangularly disposed about said axis;
a load/unload mechanism for transferring a substrate to and from any of said substrate head assemblies rotated to a position adjacent thereto; and
N polishing surfaces engageable with respective ones of substrates supported on said substrate head assemblies;
wherein said N polishing surfaces and said load/unload mechanism are located to allow said N polishing surfaces to engage respective ones of N substrates supported on N of said substrate head assemblies while said load/unload mechanism is transferring another substrate to or from yet another of said substrate head assemblies.

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30. The polishing apparatus of Claim 29, wherein said N polishing surfaces and said (N+1) substrate head assemblies provide rotary engagement between said N polishing surfaces and corresponding ones of N substrates.

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31. The polishing apparatus of Claim 30, wherein said N polishing surfaces and said (N+1) substrate head assemblies provide additional linear and reciprocal engagement between said N polishing surfaces and corresponding ones of N substrates.

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32. A polishing method practiced on an apparatus comprising (a) a rotatable support supporting a plurality of rotatable substrate heads capable of supporting a substrate thereon and (b) a plurality rotatable platens having respective polishing surfaces, comprising the steps of:
rotating said support to a polishing position to allow one of said substrate heads to engage a substrate supported thereon with one of said polishing surfaces associated with one of said platens;
rotating said one substrate head about a first axis;
rotating said one platen about a second axis; and
providing motion between one platen and said one substrate head while said substrate is engaged with said one polishing surface to produce reciprocal and periodic variation of a distance between said first and second axes.

33. The polishing method of Claim 32, wherein said support is rotatable to a plurality of polishing positions allowing said one substrate head to engage said substrate with any of said polishing surfaces.

34. The polishing method of Claim 33, wherein a plurality of substrates supported on respective ones of said substrate heads are capable of being simultaneous engaged with a plurality of said polishing surfaces.

35. The polishing method of Claim 32, further comprising:
an initial step of rotating said support to position said one substrate head at a load/unload position;
loading said substrate to said one substrate head positioned at said load/unload position;
a final step of rotating said support to position said one substrate head at said load/unload position; and
unloading said substrate from said one substrate head positioned at said load/unload position.

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36. A polishing apparatus, comprising:
a plurality of substrate heads rotatable about respective first axes and capable of supporting respective substrates thereon;
a plurality of platens rotatable about respective second axes and having respective polishing surfaces;
a rotatable support supporting said substrate heads and capable of positioning any of said substrate heads at polishing positions adjacent any of said platens;
wherein one of said substrate heads located at one of said polishing positions and one of said platens located at said one polishing position are movable toward and away from each other providing periodic variation of a distance between said first and second axes associated with said one substrate head and said one platen.

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37. The polishing apparatus of Claim 36, 24
comprising (N+1) of said substrate heads and N of said polishing stations located at N polishing positions, where $N > 1$; and
further comprising a load/unload station disposed at a load/unload position for transferring substrates to and from any of said substrate heads;
wherein said N polishing positions and said load/unload positions are located at (N+1)